

AMENDMENTS TO THE CLAIMS

In the claims, please cancel claims 17-18 and amend claims 1, 6-7, 10, 15-16, and 19-20 as follows:

1. (currently amended) A composition for delivering a polynucleotide to a mammalian cell *in vivo* comprising: a reversibly-modified membrane active polyamine-polynucleotide conjugate wherein:
  - a) the membrane active polyamine has molecular weight greater than 10,000 daltons;
  - b) the reversibly-modified membrane active polyamine is linked to the polynucleotide via a labile covalent bond; and,
  - c) the reversibly-modified membrane active polyamine consists of a negatively charged polymer that is not membrane active wherein the negative charge comes from a plurality of carboxyl groups linked to the polymer via pH-labile covalent linkages wherein cleavage of the pH-labile covalent bonds in response to a decrease in pH results cleavage of the carboxyl groups from the polymer and formation of amine groups thereby forming a membrane active polyamine a plurality of amines on the polyamine are reversibly modified by attachment of carboxyl groups via pH labile covalent bonds to form a negatively charged polymer wherein breakage of the pH labile covalent bonds in response to a decrease in pH results in cleavage of the carboxyl groups from the polyamine and restoration of the amines on the polyamine.
2. (canceled)
3. (previously presented) The composition of claim 1 wherein the polynucleotides consists of an oligonucleotide.
4. (original) The composition of claim 3 wherein the polynucleotide is selected from the group consisting of: dsRNA, siRNA, microRNA, siRNA expression cassette, antisense oligonucleotide and ribozyme.
5. (canceled)
6. (currently amended) The composition of claim 1 wherein the membrane active polyamine consists of a polyvinyl ether.
7. (currently amended) The composition of claim 1 wherein the membrane active polyamine consists of an amphipathic polymer.
- 8-9. (canceled)

10. (currently amended) A composition for delivering a biologically active compound to a mammalian cell *in vivo* comprising: a reversibly-modified membrane active polyamine-biologically active compound conjugate wherein:
  - a) the membrane active polyamine has molecular weight greater than 10,000 daltons;
  - b) the reversibly-modified membrane active polyamine is linked to the biologically active compound via a labile covalent bond; and,
  - c) the reversibly-modified membrane active polyamine consists of a negatively charged polymer that is not membrane active wherein the negative charge comes from a plurality of carboxyl groups linked to the polymer via pH-labile covalent linkages wherein cleavage of the pH-labile covalent bonds in response to a decrease in pH results cleavage of the carboxyl groups from the polymer and formation of amine groups thereby forming a membrane active polyamine the polymer is linked to the biologically active compound via a labile covalent bond and a plurality of amines on the polymer are reversibly modified by attachment of carboxyl groups via labile covalent bonds to form a negatively charged polymer wherein breakage of the labile covalent bonds results in cleavage of the carboxyl groups from the polyamine and restoration of the amines on the polyamine.
11. (original) The composition of claim 10 wherein the biologically active compound comprises a polynucleotide.
12. (original) The composition of claim 11 wherein the polynucleotides consists of an oligonucleotide.
13. (original) The composition of claim 12 wherein the polynucleotide is selected from the group consisting of: dsRNA, siRNA, microRNA, siRNA expression cassette, antisense oligonucleotide and ribozyme.
14. (canceled)
15. (currently amended) The composition of claim 10 wherein the membrane active polyamine consists of an amphipathic polymer.
16. (currently amended) The composition of claim 10 wherein the membrane active polyamine consists of a polyvinyl ether.
17. (canceled)
18. (canceled)

19. (currently amended) A method for delivering a biologically active compound polynucleotide to a mammalian cell *in vivo* comprising:
  - a) attaching the biologically active compound polynucleotide to an amphipathic membrane active polyamine having a molecular weight greater than 10,000 daltons via a labile bond to form a conjugate,
  - b) reversibly modifying a plurality of amines on the amphipathic membrane active polyamine by covalent attachment of carboxyl groups to the amines via very pH-labile bonds to form a negatively charged polymer that is not membrane active wherein cleavage of the pH-labile covalent bonds in response to a decrease in pH results cleavage of the carboxyl groups from the polymer and formation of amine groups thereby regenerating the amphipathic membrane active polyamine wherein cleavage of the labile bonds restores the amines on the amphipathic membrane active polyamine; and,
  - c) contacting the cell with the conjugate.
20. (currently amended) The method of claim 19 wherein the polynucleotide is selected from the group consisting of: dsRNA, siRNA, microRNA, siRNA expression cassette, antisense oligonucleotide and ribozyme The method of claim 19 wherein the biologically active compound comprises a polynucleotide.